



# Tropical Winds

The Official Newsletter of WFO Miami

Sunset in Doral - Dan Gregoria - July 2011

Issue 9 – Fall 2012

Welcome to the Fall 2012 issue of *Tropical Winds*. In this issue, we will look back at the weather conditions that South Florida experienced this past meteorological summer (June, July, and August).

Also in this issue, we will discuss South Florida impacts from Tropical Storm Debby and Tropical Storm Isaac, as well as local office personnel changes.

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Beginning in November... *Tropical Winds* will switch over to a semi-annual publication, covering the rainy (November issuance) and dry (May issuance) seasons.

*Enjoy!*



## Weather Summary

Dan Gregoria - October 2009

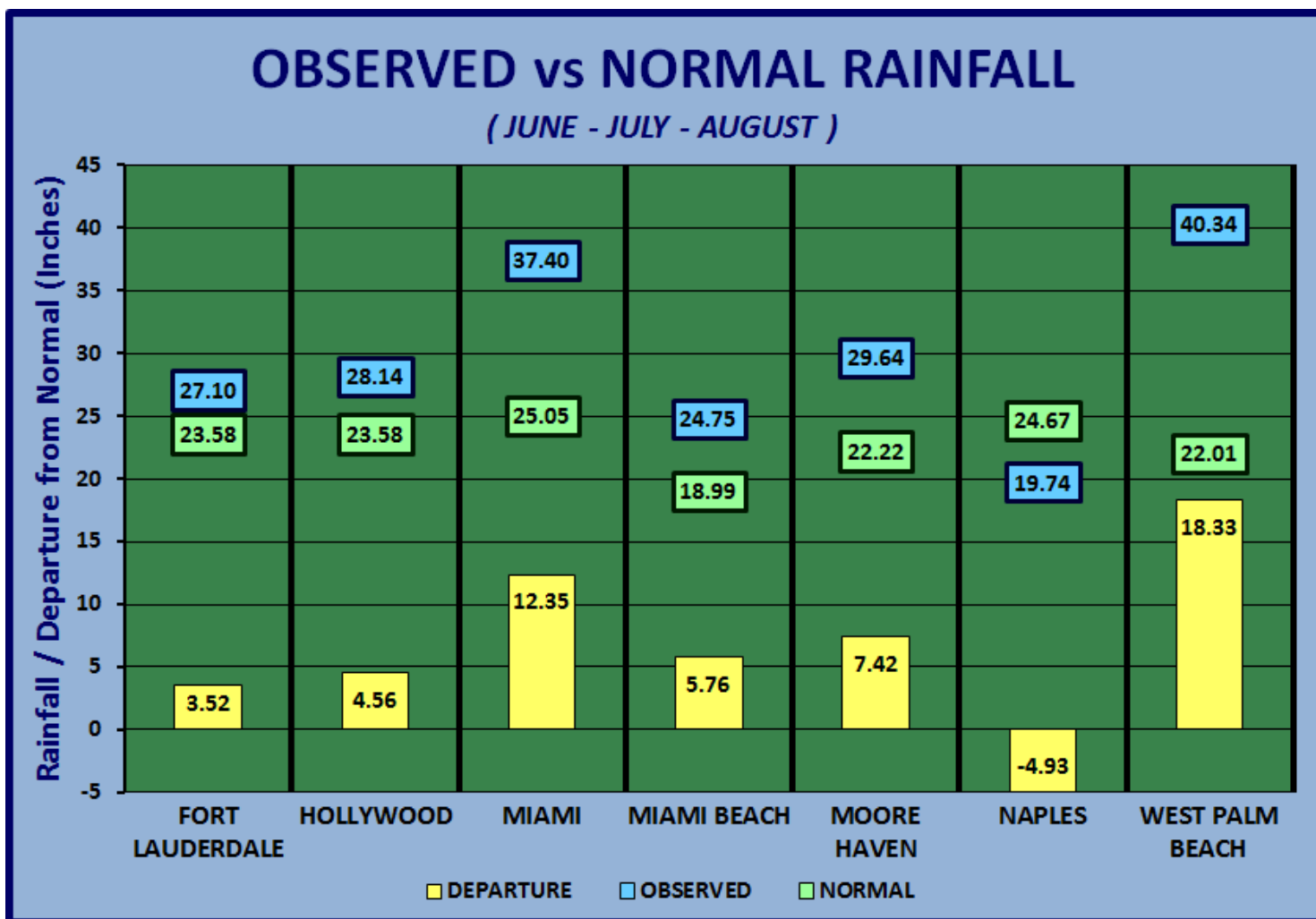
*By: David Ross and Dan Gregoria*

### Looking Back at June, July, and August

Weather conditions across South Florida were typically hot and humid for the summer months of June, July, and August. Rainfall this summer has left 3 of the 4 main climate sites across South Florida with above normal totals for the season and year. The southwest coast was the outlier in both cases, ending with seasonal and annual deficits at Naples of 4.93 and 7.47 inches, respectively.

West Palm Beach ended up with 40.34 inches of rainfall this summer, ranking it as the wettest on record. The previous record was 36.25 inches back in 1901. Additional locations that landed in their 'Top 10' for wettest summers were Miami (37.40") ranking fourth, and Moore Haven (29.64") with its tenth.

The graphic below depicts the observed and normal 3-month rainfall totals, in blue and green respectively, and the departure/difference from normal in yellow. The sites listed to provide a general idea for South Florida are: Naples Municipal Airport, Fort Lauderdale/Hollywood International Airport, Hollywood, Miami International Airport, Miami Beach, Moore Haven, and Palm Beach International Airport.



Temperatures over the past three months were near or below normal, with the 3-month averages ranging between 0.1 and 0.9 on the cooler side. August was the only month to see an above-normal temperature average, but even then it was only one tenth of a degree above normal at Naples. The coolest month, compared to normal for these locations, was July with a departure of 1.3 degrees below normal at Fort Lauderdale. West Palm Beach stayed relatively close to normal each month, which is impressive considering how much rain fell in August!

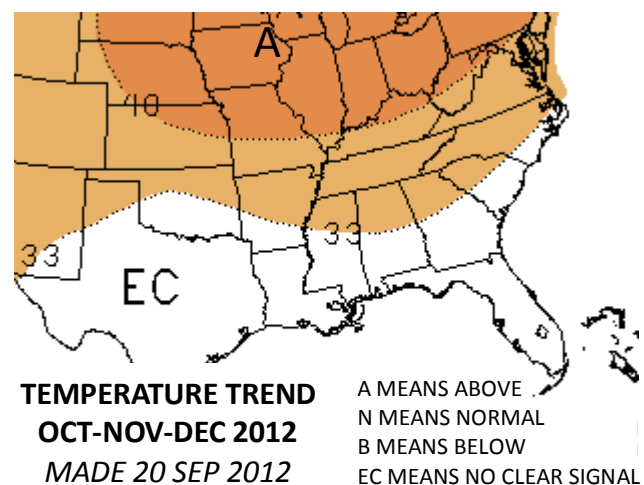
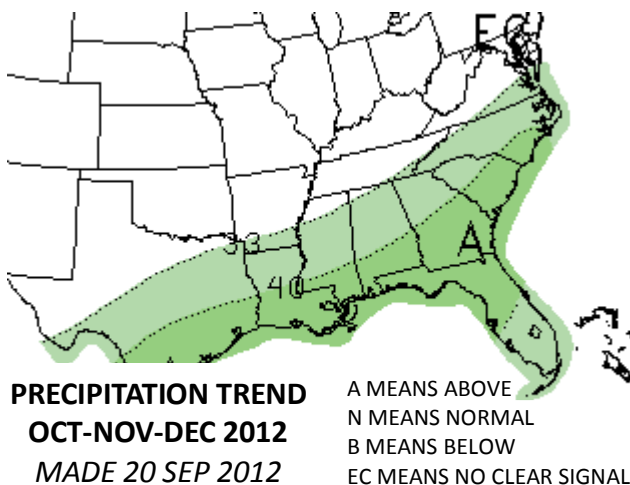
The table below breaks down the average monthly temperature and departure from normal at Naples Municipal Airport, Fort Lauderdale/Hollywood International Airport, Miami International Airport, and Palm Beach International Airport.

**Average Monthly Temperature (degrees Fahrenheit) & Departure from Normal  
(June 1, 2012 – August 31, 2012)**

	Naples		Fort Lauderdale		Miami		West Palm Beach	
	Avg.	Dep.	Avg.	Dep.	Avg.	Dep.	Avg.	Dep.
<b>Jun.</b>	81.1	-0.8	82.4	-0.7	82.6	-0.1	81.3	-0.1
<b>Jul.</b>	82.7	-0.4	83.0	-1.3	83.4	-0.7	82.5	-0.2
<b>Aug.</b>	83.3	+0.1	83.8	-0.8	83.9	-0.3	83.0	0.0
<b>3-Month</b>	<b>82.4</b>	<b>-0.4</b>	<b>83.1</b>	<b>-0.9</b>	<b>83.3</b>	<b>-0.4</b>	<b>82.3</b>	<b>-0.1</b>

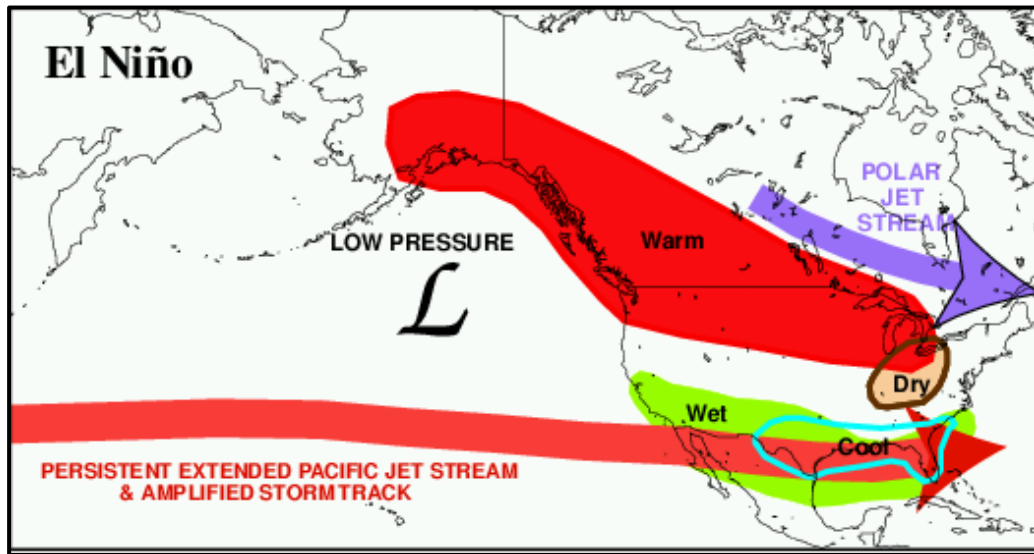
## September through November Outlook

The Climate Prediction Center's 3-month forecast depicts an above normal rainfall trend across the southeast, but doesn't have a clear indication on whether temperature trends will be above, below, or near normal for South Florida. However, an above normal temperature trend is indicated for much of the country.



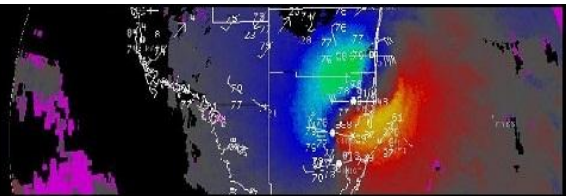
Typically, the rainy season, in which South Florida experiences nearly daily thunderstorm activity in a very humid environment, comes to an end during October. However, the end dates of the rainy season can vary widely. The median end date of the rainy season is October 17<sup>th</sup>, but it has ended as early as September 24<sup>th</sup> and as late as November 5<sup>th</sup>. The ending of the rainy season is characterized by consistently lower humidity (dewpoints below 70°F Degrees) along with an end to daily sea breeze induced thunderstorm activity.

Beyond the next three months, with El Niño conditions expected, South Florida could potentially see a cooler and wetter winter period. The graphic below depicts typical weather patterns during El Niño winters for North America.



*Outlook & El Niño images courtesy of the Climate Prediction Center.*

## *TS Debby Tornadoes*



Hurricane Katrina Moves into Miami-Dade County August 25, 2005

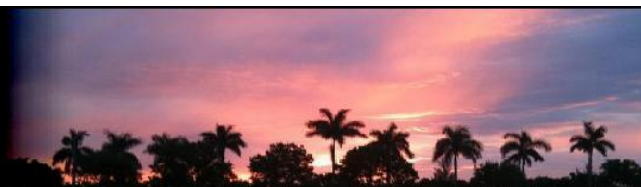
*By: Dan Gregoria*

A total of ten tornadoes were reported in south Florida on the weekend of June 23-24 as a result of the outer circulation associated with Tropical Storm Debby in the northeastern Gulf of Mexico. This is an example of how tropical systems can have far reaching effects!

Two tornadoes occurred on June 23<sup>rd</sup> and eight tornadoes hit on June 24<sup>th</sup>. The total of eight tornadoes in a four-hour period on June 24<sup>th</sup> is the most in one day over the southern Florida peninsula since October 14, 1964 when Hurricane Isbell also spawned eight tornadoes. The tornadoes during this two-day period were of EF0 intensity (of those that were rated).

A more detailed look at the tracks of the individual tornadoes associated with Tropical Storm Debby can be found [here](#).

# TS Isaac Impacts



Sunrise over Doral - August 2010 - Andrew Tugler

By: Dan Gregoria and David Ross

Tropical Storm Isaac passed some 400 miles to the south of the Florida peninsula and localized excessive rainfall resulted. The heaviest rain occurred in western portions of the West Palm Beach metropolitan area, where radar estimated up to 20 inches of rainfall. This resulted in widespread flooding in and around the Wellington and The Acreage areas, another example of how tropical systems can have far reaching effects. Below are a few of the highest wind gusts and rainfall amounts recorded during Isaac's passage. A more detailed look at Isaac's effects on South Florida can be found [here](#).

## Top 10 Wind Gusts (mph)

<b>Virginia Key</b> (HANDAR, Elevated Sensor)	<b>68</b>
<b>Port Everglades</b> (WeatherFlow)	<b>67</b>
<b>Fowey Rocks</b> (C-MAN Station)	<b>63</b>
<b>Boynton Beach</b> (WeatherFlow)	<b>62</b>
<b>Palm Beach Int'l Airport</b> (ASOS)	<b>61</b>

<b>NWS Miami</b> (Estimated by NWS Employees)	<b>60</b>
<b>Virginia Key</b> (AOML)	<b>60</b>
<b>Pompano Beach</b> (WeatherBug)	<b>60</b>
<b>West Dade</b> (WeatherBug)	<b>59</b>
<b>N. Lake Okeechobee</b> (SFWMD)	<b>59</b>

## Top 5 Rainfall Amounts (inches)

<b>Lion Country Safari - 3 E</b> (CoCoRaHS)	<b>15.86</b>
<b>Boynton Beach - 1 N</b> (CoCoRaHS)	<b>13.74</b>
<b>Greenacres City - 2 NW</b> (Private Citizen)	<b>13.10</b>
<b>Wellington</b> (Private Citizen)	<b>12.55</b>
<b>The Acreage - 2 NNW</b> (Private Citizen)	<b>12.29</b>

<b>Loxahatchee Wildlife Refuge</b> (COOP)	<b>12.24</b>
<b>Florida Gardens - 6 SSW</b> (Private Citizen)	<b>11.98</b>
<b>Florida Gardens - 1 S</b> (CoCoRaHS)	<b>11.52</b>
<b>I-75/US-27 - 12 NNW</b> (SFWMD)	<b>11.21</b>
<b>Haverhill - 3 NW</b> (Private Citizen)	<b>11.15</b>

# Changes at the WFO





Sunset in Doral - Spring 2011 - Dan Gregoria

*By: Dr. Pablo Santos, Dan Gregoria, and David Ross*

WFO Miami said 'Bon Voyage' to two great lead forecasters this past summer:

-  **Roberto Garcia** – Roberto had been a forecaster at WFO Miami for close to 13 years, and is now the new Meteorologist-in-Charge at WFO San Juan, Puerto Rico.
-  **Mike Bettwy** – Mike was a forecaster at WFO Miami for 2 years, and is now one of the newest scientists at National Weather Service Headquarters in Washington, D.C.

The new lead forecasters joining WFO Miami are:

-  **Steven Ippoliti** – Steven comes to us from WFO Binghamton, New York. He has been a forecaster since 2006 and is a certified Incident Meteorologist.
-  **Stephen Konarik** - Stephen will be coming to us from the WFO Sterling, Virginia. He has been a forecaster since 2009, leading the Flash Flood Program and assisting with Sterling's Tropical Cyclone Program.

**Best of luck, Roberto and Mike!**  
**Welcome to Miami, Steven and Stephen!**

## Thanks for Reading!



Butterfly World in Coconut Creek - 2008 - Andrew Tingle

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